Royal Devon University Healthcare NHS Foundation Trust

Lumbar puncture in newborn babies

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What is a lumbar puncture?

A lumbar puncture (LP) is a routine test where a very small needle is inserted into the base of the spine to collect a sample of fluid called cerebrospinal fluid. Cerebrospinal fluid (CSF) surrounds the brain and the spinal cord.

Why is it needed?

If doctors suspect that your baby has an infection (sometimes referred to as sepsis), your baby will initially have blood tests on our Special Care Unit (SCU) and will be treated with intravenous antibiotics. These blood tests will help doctors decide whether your baby may have a bacterial bloodstream infection and whether further routine tests, such as a lumbar puncture are required.

If your baby's blood results show that they may have a bacterial bloodstream infection, doctors may want to perform a lumbar puncture to ensure that your baby has not got meningitis (swelling of the lining of the brain caused by an infection in the CSF). Getting a sample of CSF will help doctors to treat your baby with the correct dose, type and duration of antibiotics.

What does it involve?

A doctor will perform the procedure on our SCU with the assistance of a nurse. A trained neonatal nurse will hold your baby in the appropriate position (lying on their side curled up in a ball or swaddled in a vertical tucked position), which allows the doctor to feel for spaces in between the spinal bones. The doctor will clean the lower part of your baby's back using an antiseptic solution. The nurse holding your baby may ask if they can administer sucrose and give your baby a pacifier to reduce any pain caused by the procedure. Once the doctor is happy, a small needle is carefully inserted into the lower spine and the CSF is collected. Approximately between 5 – 8 drops are collected into a small number of sterile containers. The needle is then removed and a sterile dressing is applied.

The samples of CSF that have been collected are immediately sent to the laboratory for testing. Some results will be available after 2 hours however the laboratory will also try and grow any bacteria in the sample which takes approximately 48 hours.

How long will it take?

The procedure usually takes approximately 30 minutes.

Can I be present during the test?

Yes, when the doctor comes to discuss the procedure, you may tell them or the nurse that you would like to be present. However, many parents find this procedure difficult to watch and it often causes distress.

Is it a painful procedure?

A lumbar puncture can be an uncomfortable procedure similar to a blood test or cannula being inserted. Most babies get upset with being held in position rather than the LP itself. Our doctors and nurses will ensure that pain relief, such as sucrose and a pacifier are offered to reduce any pain caused by the procedure.

Are there any risks?

A lumbar puncture is a routine and relatively safe procedure. It is rare for complications to occur however the complications sometimes associated with lumbar puncture include:

- Failure to get a sufficient sample of CSF which may mean the test needs to be performed again
- Infection can be introduced by the needle. However, this is rare due to the use of an aseptic technique and the antiseptic solution applied to your baby's lower back before the procedure
- Bleeding can be caused if a small blood vessel is caught by the needle, however this is minor and can be resolved by a dressing and pressure being applied.

Can I refuse this procedure?

Whenever possible the doctor will ask for your consent to perform a lumbar puncture. As a parent or carer you have the right to refuse this test, however this may not be in the best interests of your baby. Without a sample of CSF, doctors may have difficulty in determining a cause for your baby's illness and in ensuring your baby is receiving the correct treatment.

References

Meningitis Research Foundation. (2018). Lumbar Puncture (LP). [Online] Available at: https://www.meningitis.org/getmedia/e37b3e16-49e0-4676-937e-e46f563ab749/LP-Patient-Information-Sheet [Accessed 3/5/18]

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PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or email rduh.pals-northern@nhs.net. You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

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Tell us about your experience of our services. Share your feedback on the Care Opinion website www.careopinion.org.uk.

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